

## Multi-Probiotic 4000

### DESCRIPTION

Each Multi-Probiotic 4000 capsule, provided by Douglas Laboratories, contains over four billion beneficial organisms, including representatives of both the lactobacillus and bifidobacterium genera, mixed in a base of prebiotic fructooligosaccharide.

### FUNCTIONS

Oral supplements of live, beneficial intestinal micro-organisms for nutritional health and well-being are known as probiotics. Probiotic dietary lactobacilli colonize the intestinal tract, depending on the specific bacterium-to-host affinity. Bacteria are continually in competition for colonization space. The original bacterial colonies have an advantage over transient bacteria. Nevertheless, the composition of the intestinal microflora is dynamic and constantly changing.

If harmful microorganisms proliferate, the equilibrium is disturbed, and it becomes difficult even for indigenous bacteria to maintain their necessary territory to colonize the intestine. Antibiotics tend to kill off both beneficial and harmful bacteria, and thus may also disturb the normal, healthy balance of intestinal microorganisms. When potent probiotic supplements, such as Multi-Probiotic 4000, are supplied regularly, chances are greatly increased for establishing and maintaining a healthy population of beneficial intestinal microorganisms. Once established, a normal intestinal microflora rich in lactobacilli creates acidic conditions that are unfavorable for the settlement of pathogenic microorganisms.

Probiotics have been shown to exert a beneficial support through modification of the immune system host via the gut environment. Clinical trials also suggest that the exposure to microbes through the gastrointestinal tract powerfully shapes immune function. Lactobacillus rhamnosus is one of the most widely studied probiotics, noted and valued for its ability to survive in the harsh conditions of the digestive and urinary tracts. L. rhamnosus is extremely well tolerated by men and women with very rare side effects. Studies have shown that, taken regularly, L. rhamnosus can be an effective supplement in promoting and maintaining digestive tract health.

The ability for probiotic cultures to survive stomach acidity and pH has been in question. Bifidobacterium was studied in vitro to be extremely resistant to low pH and bile acids in the duodenum. L. acidophilus DDS-1™ incorporates proprietary cryoprotectant agents and stabilizers specifically designed to protect the organism and enhance stability. Clinical analysis of DDS-1 and bifidobacterium also shows increased binding to human intestinal walls and protective effects of intestinal colonization. Certain bacterial acids in the intestines produce secondary bile acids. One study indicated that L. acidophilus DDS-1 decreased the potential for bacterial transformations of primary bile acid.

Prebiotics are carbohydrates that have short molecular chains. They function as non-digestible ingredients that can positively affect selected groups of beneficial intestinal microflora, such as lactobacillus. While probiotics merely add beneficial microflora, prebiotics affect the intestinal environment so that beneficial colonies of microflora can flourish. By aiding the beneficial microflora's survival, pathogenic microflora can have a decreased chance of survival.

### INDICATIONS

Multi-Probiotic 4000 capsules may be a useful dietary supplement for those who wish to support their intestinal microflora with meaningful amounts of beneficial microorganisms.

## Multi-Probiotic 4000

### FORMULA (#7497)

Each Capsule Contains:

**Multi-Strain Probiotic Blend** .....4 Billion CFU

Containing:

*Lactobacillus acidophilus* (DDS-1).....1.150 Billion CFU

*Lactobacillus rhamnosus* (Lr-32) .....1.150 Billion CFU

*Lactobacillus rhamnosus* (*Bifidus*)(HA-114)... 775 Million CFU

*Lactococcus lactis* (LI-23) ..... 275 Million CFU

*Bifidobacterium longum* (BI-05) ..... 275 Million CFU

*Bifidobacterium bifidum* (Bb-02) ..... 275 Million CFU

*Streptococcus thermophilus* (St-21) ..... 150 Million CFU

**Digestive and Prebiotic Blend** ..... 210 mg

FOS (fructooligosaccharides) and *Ulmus fulva*  
(inner bark)

Other ingredients: Gelatin (capsule), and silica

### SUGGESTED USE

Adults take one capsule, 1 to 3 times daily or as directed by a healthcare professional.

### SIDE EFFECTS

No adverse side effects have been reported.

### STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

### REFERENCES

Rondanelli M, et al. World J Clin Cases. 2015 Feb 16;3(2):156-62. doi: 10.12998/wjcc.v3.i2.156. Review.

Lin CS, et al. Biomed J. 2014 Sep-Oct;37(5):259-68. doi: 10.4103/2319-4170.138314.

Polak-Berecka M, Waško A, Paduch R, Skrzypek T, Sroka-Bartnicka A. Antonie Van Leeuwenhoek. 2014 Oct;106(4):751-62. doi: 10.1007/s10482-014-0245-x.

Nauta AJ, Ben Amor K, Knol J, Garssen J, van der Beek EM. Am J Clin Nutr. 2013 Aug;98(2):586S-93S. doi:10.3945/ajcn.112.039644.

Jarocki P, Podleśny M, Glibowski P, Targoński Z. PLoS One. 2014 Dec 3;9(12):e114379. doi:10.1371/journal.pone.0114379.

Bergström A, et al. BMC Res Notes. 2012 Aug 2;5:402. doi: 10.1186/1756-0500-5-402.

Tsai CC, et al. ScientificWorldJournal. 2014;2014:690752. doi: 10.1155/2014/690752.

Gibson GR, Fuller R. J Nutr. 2000 Feb;130(2S Suppl):391S-395S. Review.

## Multi-Probiotic 4000

Cebra JJ. Am J Clin Nutr 1999;69:1046S-1051S.

Collins MD, Gibson GR. Am J Clin Nutr 1999;69:1052S-1057S.

Donnet-Hughes A, et al. J Dairy Sci 1999;82:863-9.

Jacobsen CN, et al. Appl Environ Microbiol 1999;65:4949-56.

Pessi T, Sutas Y, Saxelin M, Kallioinen H, Isolauri E. Appl Environ Microbiol 1999;65:4725-8.

Venturi A, et al. Aliment Pharmacol Ther 1999;13:1103-8.

**For more information visit [douglaslabs.com](http://douglaslabs.com)**

† These statements have not been evaluated by the Food and Drug Administration.  
This product is not intended to diagnose, treat, cure, or prevent any disease.

Manufactured by  
Douglas Laboratories  
600 Boyce Road  
Pittsburgh, PA 15205  
800-245-4440  
[douglaslabs.com](http://douglaslabs.com)



**You trust Douglas Laboratories.  
Your patients trust you.**